University of Sussex

Institute of Development Studies

African Technology Policy Studies Network

The political economy of low carbon energy in Kenya

Climate Compatible Development in Kenya

Is it possible for Kenya to simultaneously tackle energy poverty, contribute to climate change mitigation and reduce exposure to climate vulnerability?

There is growing international focus on how to support more integrated approaches to addressing climate change in ways that capture synergies and minimise the trade-offs between climate change mitigation, adaptation and development. These aims are embodied in the concept of climate compatible development (CCD).[1] But what does this look like in practice in Kenya?

With a National Action Plan on Climate Change, a Vision 2030 Strategy, a new constitution and a revised Energy Policy, Kenya is at critical cross-roads with respect to defining its energy future for the years to come. The challenge is to enable a just transition to a lower carbon economy that delivers poverty reduction and climate resilience at the same time. But thinking about who sets the terms of transition and for whom, raises key political questions about the role of actors, interests and institutions in the energy sector. In other words, who has the power to power change?

Solar sisters Initative_Uganda_Deutsche Welle_Flickr CC

This note summarises some recent work on the political economy of CCD supported by the Climate and Development Knowledge Network.[2] It aims to understand the role of politics, actors and institutions in enabling or frustrating the pursuit of climate compatible energy development in Kenya.

The energy sector in Kenya represents a fascinating case of the potential and limits of CCD in practice. Renewable energy potentially meets not only mitigation aims, but may also reduce vulnerability to climate change and bring tangible benefits to poorer groups. For some, solar power in particular offers hope of CCD building on a successful market for off-grid solar technologies in the country.[3] Kenya is among the countries with the lowest rate of access to modern energy services in Africa and the world. Other drivers include both energy price vulnerability and the climate vulnerability of electricity production. Droughts have long affected hydro capacity and increased the price of energy. Economic vulnerabilities such as the volatility of oil prices and currency exchange rates provide further incentives to expand renewable energy sources.

Kenya presents a relatively rare case in which national energy security goals (such as cheap and reliable electricity generation) can be seen by both government and donors to be better served by renewable energy technologies than by fossil fuels. With a fragile grid, and some of the highest energy costs in region, a variety of drivers align to make 'clean' energy and lower carbon options more attractive.

This apparent win-win for climate and development has to be set, however, against news of recent oil and gas discoveries that have generated excitement in the country, but that may slow the embrace of renewable energy.

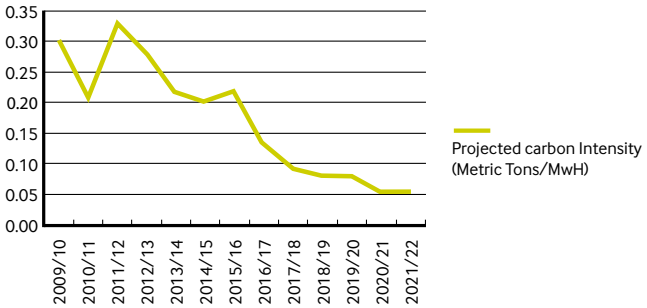
This is a critical time for Kenya in deciding its energy future and whether and how it will aim to make it 'climate compatible'. Issues of power and political economy will play a key role in determining technological and social outcomes: the winners and losers from different energy pathways and on whose terms and how the trade-offs between competing policy objectives are resolved. This is the value of political economy analysis - to understand the potential for energy systems to meet climate, development and adaptation needs simultaneously in a given political context.

Envisioning a Different Future For Kenya's leaders, energy is recognised as a key pillar of development, and the current constraints on energy supply threaten national goals of economic growth. Kenya's Vision 2030 aims to transform Kenya into "a newly industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment". As in many other countries, cheap energy sources are central to this vision. Yet the climate compatible development of energy resources requires us to ask difficult questions about the pursuit of cheap energy sources. Do they exacerbate climate change? Do they leave Kenya and its citizens more vulnerable to economic and environmental uncertainties? Whose vision of development is served by the production and distribution of different types of energy?

Integrating Policy One of the most important visions of energy development in Kenya is provided by the draft National Energy Policy (third draft). The policy refers to renewable energy as having the potential to "enhance energy security, mitigate climate change, generate income, create employment and generate foreign exchange savings".

However, fossil fuels are also given a prominent role in the country's energy matrix, and the Policy reveals the "excitement" caused by the recent discovery of oil in Northern Kenya and the subsequent need "to develop adequate petroleum production capacity in the country". Coal too is defined as having "the potential to become the most reliable and easily accessible energy source for electricity generation". Renewable energies are seen as important as far as they can complement the country's energy portfolio and provide energy security.

Projected Carbon Intensity of Kenya's Electricity Grid
Source: World Bank 2012[4]



Tackling Poverty

Energy for the Poor or Energy for Industry? All energy consumers are interested in lowering energy prices – big industrial companies, small businesses, wealthy consumers and the poorest for whom prices are prohibitive for even the most basic needs. The pressures to reduce energy prices in Kenya are a top political priority, featuring heavily in election promises and Presidential decries. Despite the emphasis on price and affordability, many government statements around energy do not refer to energy access for the poor. Rather, the price of energy for industry and creating additional capacity are the overriding concerns as reflected in the Least Cost Power Development Plan (LCPDP) (2011-2030). While it is fair to assume that economic growth will require reliable supplies of energy, experience from Kenya and around the world suggests that reducing energy poverty will not be achieved by narrow efforts to reduce energy prices.

The Kenyan Government plans 5000MW additional capacity within 4 years by 2017 from a base of 1500MW. Such ambitious targets mean that all energy sources – renewable and non-renewable, are on the cards. But some technologies fit the requirements of speed and scale in order to meet such targets better than others. These include geothermal, gas, coal and diesel. While geothermal provides a clean energy source at scale, there is potential for interest in geothermal to 'crowd out' attention to other forms of renewable energy. The attractiveness of renewables is assessed by their affordability compared with fossil fuels, their compatibility with grid expansion plans and their ability to serve broader growth objectives through their revenue generation potential.

Which poor? If there is a confluence of agendas around 'clean energy' and energy security, the trade-offs between energy security and energy access are perhaps more stark. There are competing representations of which policies and interventions serve the poor. Some policies clearly do not – without grid connection, generation capacity makes little difference. And without income generating potential from electricity the rural poor are unlikely to ever be able to pay for grid connected electricity for basic needs or productive uses. This is especially the case given the current pursuit of cost recovery principles for connection and service delivery.

Supporting or suffocating solar? Given the apparent success story of off-grid solar technologies in Kenya, there has been a high level of interest in increasing the capacity for generating solar energy. Politics again is critical to understanding why this potential has not been realised to date. While there are initiatives to promote solar though measures like the Feed-in-Tariff, the government is cautious about locking consumer into high cost solar for 20 years through long term purchasing agreements. The quote below from the Ministry of Energy (MoE) bears this out:

> 'Organisations and development agencies dealing with solar mainly focus on small projects that have no major impact.. investors are more concerned about making quick returns rather than large scale impact and transformation of poor people's lives. This is why they complain about feed in tariffs being low. The government thinks these tariffs are reasonable both for consumers and investors. This is the reason why solar production is low. The government does not want consumers to pay higher for energy' (representative of the Ministry of Energy)

What role off-grid? Beyond the issue of grid-connected energy is the question of how to meet the energy needs of the 70% or more of the population without access to the grid. Given limited grid-connectivity, off-grid solutions and mostly Solar Home Systems (SHS) have thrived in Kenya. But despite the market size and potential, only around 4.4% of total rural households (on and off grid) had an SHS by 2011.[5]

SHSs are still a niche technology which has not yet replaced the use of kerosene and batteries. Off-grid solar has advantages since it reduces demand for grid electricity. But the prevailing approach seems to be to largely to leave the off grid solar to the market and donors, other than through support to initiatives like the public building solar electrification programme of the Ministry of Energy and Rural Electrification Authority. Yet the evidence suggests that the apparent market success of SHSs has been on the basis of significant intervention and risk taking by public institutions in developing niche technologies, rather than private entities alone.[6]

Mainstreaming Climate Change

So how can climate change concerns be brought into this agenda? The Climate Change Action Plan (CCAP) is the main vehicle for integrating climate concerns with the LCPDP and V2030. It was developed in 2012 under the leadership of the Ministry of Environment and Mineral Resources (MEMR) to enable Kenya reduce vulnerability to climate change and to improve the country's ability to take advantage of the opportunities arising from climate finance.

The CCAP was developed and guided by a multi-stakeholder, multidisciplinary taskforce called the National Climate Change Action Plan Task Force (NCCAPTF). A year-long participatory process involved the public sector, the private sector, academia, NGOs, the civil society and communities. A national climate fund was also proposed to support issues related to research and development on climate change issues and drive the policy on carbon investment and carbon trading. The different mitigation actions proposed by the CCAP are to be presented as NAMAs (Nationally Appropriate Mitigation Actions) to the COP of the UNFCCC to secure climate finance for risk mitigation instruments, mostly for geothermal. Kenya has been one of the earliest recipients of fast start climate finance.

However, the Climate Change Authority Bill to embed the plan was then rejected by President Kibaki in 2013 because it was brought as a private members bill by civil society organisations and needed wider consultation. The CCAP's greatest challenge in implementation then is that it is not backed by legislation. Though climate change issues were mainstreamed into the Medium Term Plan-2, a 5-year implementation tool of the Government, a key challenge remains how to more effectively integrate climate issues into energy planning.

What role donors? Multilateral and bilateral development finance can help nurture the enabling conditions for CCD. Indeed, there is a wide perception that the low carbon energy access agenda is very donor driven. Donors are heavily involved in the Kenyan energy sector and like working with Kenya because it is more market orientated than many other countries in the region. Though the government sets the goals, donors do seem to have some influence over priorities in energy sector, including in some cases gaining access to the very highest echelons of government. The IFC also played a role in the revision of the 2013 Energy Policy to its final draft through the identification of investment opportunities on renewable energy in the country. Donors meet with the Ministry of Energy every quarter to discuss the implementation of various energy initiatives or any policy requirement that is necessary for donor operations in the country. When working together the donors present a coordinated powerful force.

Donors have also part financed domestic policy initiatives that might bring multiple CCD benefits such as promoting private sector participation in the Feed-in-Tariff (FiT) scheme, for example. The German donor KFW provides a premium on top of the government set tariff, while the World Bank also provided some technical assistance to the FiT.

Donor interest in Kenya's energy sector is also driven by potential trade and investment openings for their own corporations. Where donor country companies and donor country governments interests are in clean energy in Kenya, there is scope for them to support CCD. Recent British trade missions and US interest in geothermal are notable here.

Yet for donors to enhance CCD means not only promoting renewable energies, but also tackling energy poverty needs. For this reason the main donors support both big scale generation plus smaller scale investments. For example, the French government supports big geothermal and Compact Fluorescent Lighting (CFL) distribution projects.

Going Local? Political economy of devolution: One area of uncertainty in terms of the future trajectory of CCD efforts is devolution set up under the Constitution of 2010. This has placed the issue of power over energy policy at the heart of debate and is giving momentum to energy sector reform. Devolution may involve some further unbundling and creation of regional energy companies and bring about a greater democratisation of energy policy. Under devolution plans counties are supposed to be in charge of attracting investors, but will find it difficult to do so without control over energy.

Energy Policy is being drafted to align with the new constitution on these terms. The Ministry of Energy is considered one of the most centralised of ministries, perhaps for good reason, as centralised planning for energy is necessary to an extent. But counties are demanding control over rural electrification planning and material resources to address grid extension and connection issues. In a blow to these aspirations, in August 2013 the Transitional Authority declared that rural electrification would not be devolved at this stage, prompting angry reaction from county governors. A battle is currently taking place over capacity of counties to fulfil these roles.

Whether counties will be more responsive to the energy poverty needs of those they represent or not is unclear but certainly not to be assumed, even if many detect high levels of support for renewable energy.

Studying by solar light_EEP_Flickr Creative Commons

The Political Economy of Climate Compatible Development

Political economy analysis usefully illustrates the conflicts, trade-offs and opportunities of simultaneously trying to reconcile poverty, mitigation and adaptation policy objectives. Key moments when these objectives are openly discussed and attempts made to reconcile and integrate them reveal power dynamics at work that need to understood and engaged. Examples include the process leading to the development of Kenya's Climate Change Action Plan, the current review of Energy Policy and donor efforts to finance a lower carbon trajectory for Kenya's energy sector.

Political economy analysis can also help to locate opportunities for change. It is useful in understanding blockages to reform on the part of the incumbent regime, but also identifying opportunities for niche technologies and entrepreneurs to move things forward.

Political economy analysis usefully points to how and why some policy options are favoured over others: the relations of power which explain why some sources and technologies are privileged over others in terms of their fit with the interests of powerful domestic and external actors. Energy sources and technologies such as solar compete with growing investor, government and donor interest in geo-thermal and, increasingly, fossil fuels.

The trade-offs between climate change mitigation and low cost power appear to have been the easiest to resolve on one level in Kenya. Yet access to electricity is only one dimension of energy poverty. Pro-poor energy tends to be conflated with cheaper electricity prices whereas in many instances the drivers of policy are not pro-poor energy access concerns per se, but rather energy security concerns for the competitiveness of industry in Kenya.

The energy sector, therefore, faces deeply politicised questions of energy for whom? Industry v consumers; off-grid v on-grid; wealthy v poor consumers which imply important social and environmental trade-offs that institutions and policy-processes have to manage. This is apparent around issues of cost recovery in tariffs and the conditions considered necessary for the creation of an investor friendly sector. At present there are few efforts in the Kenyan energy sector to cater for unprofitable consumers in the current model despite the development of new financial models to collect from poorer consumers at the 'bottom of the pyramid'.

Adaptation has arisen as a concern in relation to 'clean' energy in Kenya largely in terms of climate impacts upon the water flows required for the supply of hydro energy. Yet the vulnerability of the national energy generation system is not the same as the vulnerability of the country's citizens and their diverse energy service needs at a household level.

Donors and international businesses are key actors working to shape the domestic politics of energy choices according to their mandates, which often include the promotion of lower carbon energy. Though they differ in terms of support for particular energy sources and technologies, there is a high degree of alignment among donors and between government and donors on the desirability and necessity of market-based approaches to tackling the countries energy challenges.

Overall it is important to recognise that in practice energy policy often has to be reactive and opportunistic rather than pro-active and planned. Circumstances, events, priorities and political coalitions mean that the domestic and international landscape within which energy policy is situated is constantly changing. This presents difficulties for the implementation of vision strategies or the realisation of mainstreaming goals in the longer-term Climate Change Action Plan.

An approach in which poverty, mitigation and adaptation are more balanced and effectively integrated will require working with and against the very powerful actors that benefit from and indeed seek to expand 'climate un-compatible development'. This is so because the coalitions of the 'winning and the willing': those actors that stand to gain most from the transition to a lower carbon economy, are currently too weak to drive change in Kenya, as elsewhere.

The shifts of relations of power that this would imply will likely have to come from within Kenya. But donors and other external actors might be able to support domestic coalitions of change and beneficiaries from a lower carbon energy trajectory and tip the balance of power somewhat in favour of one set of actors over another. Helping to bring together and mobilise groups of business and civil society actors with a material stake in the success of a low carbon economic pathway could be a key contribution donors and others can make.

Business actors are crucial to the pursuit of CCD in shaping regulations that support or hinder CCD. For example, the Kenyan Renewable Energy Association (KEREA) lobbied successfully for the zero-tariff policy, alongside the big importers and manufacturers of solar and groups such as the Solar Technicians Association. They managed to get the buy-in of junior officers in Ministry of Energy, the Permanent Secretary and then the Minister. Building cross-government support for the measure was vital, including hosting a workshop to bring parliamentarians into the process. This case also highlights, however, the ease with which potentially positive policy change can be reversed, with VAT at 16% now placed back on solar since September 2013.

Though energy policy in Kenya has traditionally been highly centralised, it has become more consultative allowing a greater voice for larger and smaller businesses involved in promoting renewable energy. Whose voice is heard, and whose voice is heeded, will shape which technologies and energy sources are preferred by policy-makers.

A political economy analysis such as this provides a useful tool for those within and beyond Kenya wanting an understanding of the political landscape and terrain of power they have to navigate in order to affect change.

This briefing was prepared by Peter Newell, Jon Phillips and Ana Pueyo based on a study in collaboration with the African Technology Policy Studies Network & funded by CDKN.
For further details please contact Prof. Peter Newell (P.J.Newell@sussex.ac.uk)

Climate & Development Knowledge Network

This document is an output from a project funded by the UK Department for International Development (DFID) and the Netherlands Directorate-General for International Cooperation (DGIS) for the benefit of developing countries. However, the views expressed and information contained in it are not necessarily those of or endorsed by DFID or DGIS, who can accept no responsibility for such views or information or for any reliance placed on them. This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, the entities managing the delivery of the Climate and Development Knowledge Network do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it. Management of the delivery of CDKN is undertaken by **PricewaterhouseCoopers LLP**, and an alliance of organisations including **Fundación Futuro Latinoamericano**, **INTRAC**, **LEAD International**, the **Overseas Development Institute**, and **SouthSouthNorth**.

[1] http://cdkn.org/resource/defining-climate-compatible-development-3/
[2] http://cdkn.org/
[3] http://steps-centre.org/project/low_carbon_development
[4] World Bank (2012). Project appraisal document on a proposed series of IDA partial risk guarantees in the aggregate amount equivalent to US$166 Million. Report No: 66363-KE
[5] Ondraczek, J. (2013) "The sun rises in the east (of Africa): A comparison of the development and status of the solar energy markets in Kenya and Tanzania", Energy Policy 56: 407-417
[6] http://steps-centre.org/project/low_carbon_development